

Dover/Kent County MPO



Transportation Information Booklet

December 2010



Any questions, comments, or concerns related to this publication can be directed to:



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Dover/Kent County MPO



Transportation Information Booklet 2009



December 2010

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The information in this data booklet is mainly from 2009. However, some is from 2010, as the information became available. We hope you find this publication informative and enjoyable.

— The Dover/Kent County MPO

<u>Project #</u>	<u>Project Name</u>	<u>Funds Obligated</u>
3037	Statewide-Job Access Reverse Commute (JARC) Welfare to Work Program (Old Title), FY09 Kent	53,699.00
5317	New Freedoms FTA 5317, Kent County	32,892.00
5303	Dover/Kent County MPO UPWP FY10	72,400.00
5307	FY09 Preventive Maintenance, Dover	95,400.00
5307	30' Low Floor Replacement Buses Kent (8)	860,600.00
5310	FY09 Vans for Elderly & Handicapped	141,200.00
5317	FY06 New Freedom Kent County	31,712.00
5317	FY07 New Freedom Kent County	31,712.00
5317	FY08 New Freedom Kent County	31,712.00
5317	FY09 New Freedom Kent County	31,712.00

Total: \$14,604,439

Projects for 2008 Total: \$35,446,054

Projects for 2007 Total: \$21,417,298.80

Money Obligated to MPO Projects

<u>Project #</u>	<u>Project Name</u>	<u>Funds Obligated</u>
N/A	Bridge 2-254A on Mt. Olive Cemetery Road over Wildcat Branch	\$9,600
N/A	Bridge 2-277A on Fox Hunters Road, west of Harrington	\$19,200
N/A	Bridge 2-296A on K296 Layton Corners Road over Green Branch, west of Harrington	\$333,600
N/A	Dover System Preservation: Clarence Street	\$1,000,000
N/A	Planning-Safe Routes to School	\$99,000
N/A	US 13 Roosevelt Avenue Pedestrian Crossing Improvements, Dover	\$100,000
28-042-01	Wyoming Mill Road Realignment	\$1,500,000 (\$316,789 — 2008)
24-122-03	SR 1, North Frederica Overpass	\$9,200,000 (\$12,063,484 — 2008) (\$25,600 — 2007)
23-016-01	Carter Road (K137), corridor improvements, Sunnyside Road to Wheatley's Pond Road, Smyrna	\$9,600,000 (\$215,250 — 2008) (\$234,869.04 — 2007)

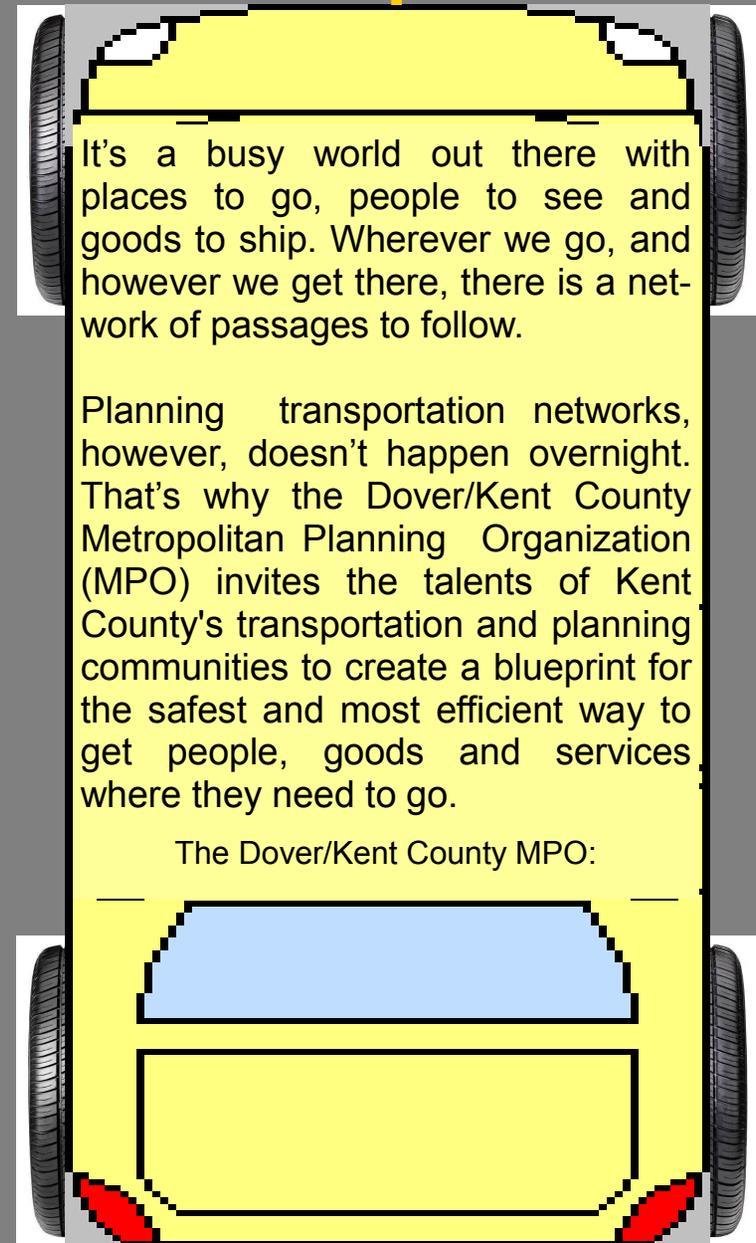


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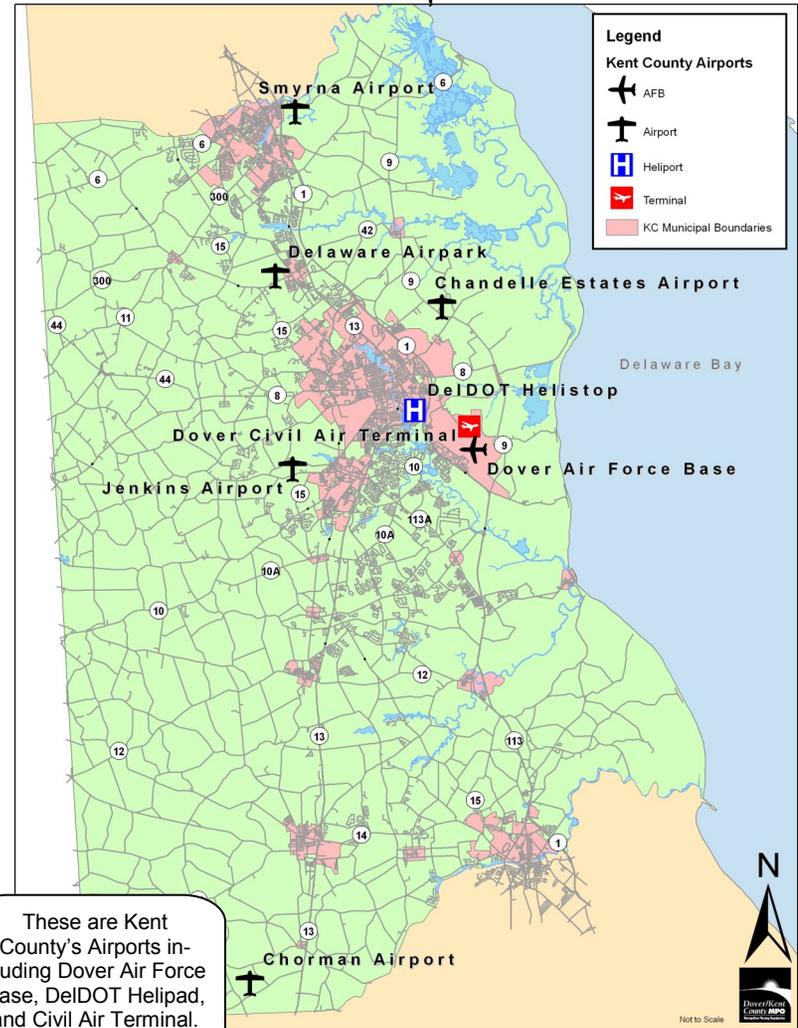
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Kent County Airports



These are Kent County's Airports including Dover Air Force Base, DeIDOT Helipad, and Civil Air Terminal.



The Delaware Airpark in Cheswold is home to 45 based aircraft and Delaware State University's flight training program, it serves both corporate and recreational flyers year-round. The airport is especially busy during the summer months when Delaware State conducts NASA and Air Force ROTC pilot training.

The Civil Air Terminal, adjacent to Dover Air Force Base, is operated by the Delaware River and Bay Authority under the terms of a special-use agreement with the U.S. Air Force. Use of the CAT is limited to aircraft having Prior Permission Requests (PPRs) approved by the DRBA. (Source, DRBA Web site)

FREIGHT



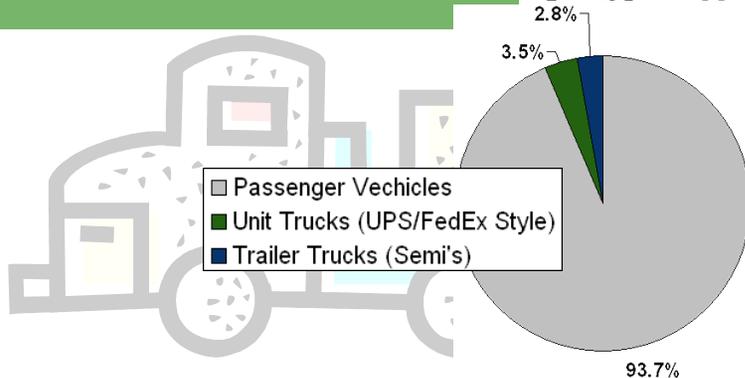
Huge tractor trailers are everywhere, transporting tons of products. How many are on the road? There are Traffic Management Operations Study (TOMS) traffic recorders throughout Kent County that can differentiate between heavy trucks and other types of vehicles. The TOMS traffic recorders collect truck counts which are reported as AADT.



AADT 2008

	Total AADT	Percentage
Passenger Vehicles	271,338	93.7%
Unit Trucks (UPS/FedEx Style)	10,053	3.5%
Trailer Trucks (Semi's)	8,221	2.8%

The Percentage of Trucks on the road



AADT and Freight data based on 2001 TOMS

Traffic

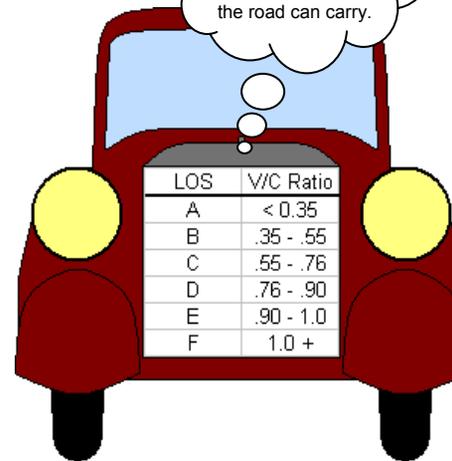
Traffic can be one car on a country road or hundreds of vehicles on an urban highway. Three measures are used to define traffic in Kent County: Average Annual Daily Traffic (AADT), Level of Service (LOS), and Vehicle Miles Traveled (VMT).

Why is AADT Important?

AADT calculates the average number of cars that are on the road throughout the year. To get the AADT, you take the Average Daily Traffic (ADT) and adjust it for the Seasonal Adjustment Factors (SAF). DeIDOT (Delaware Department of Transportation) uses 61 Automatic Traffic Recorder Stations throughout the state to record the traffic counts each day.



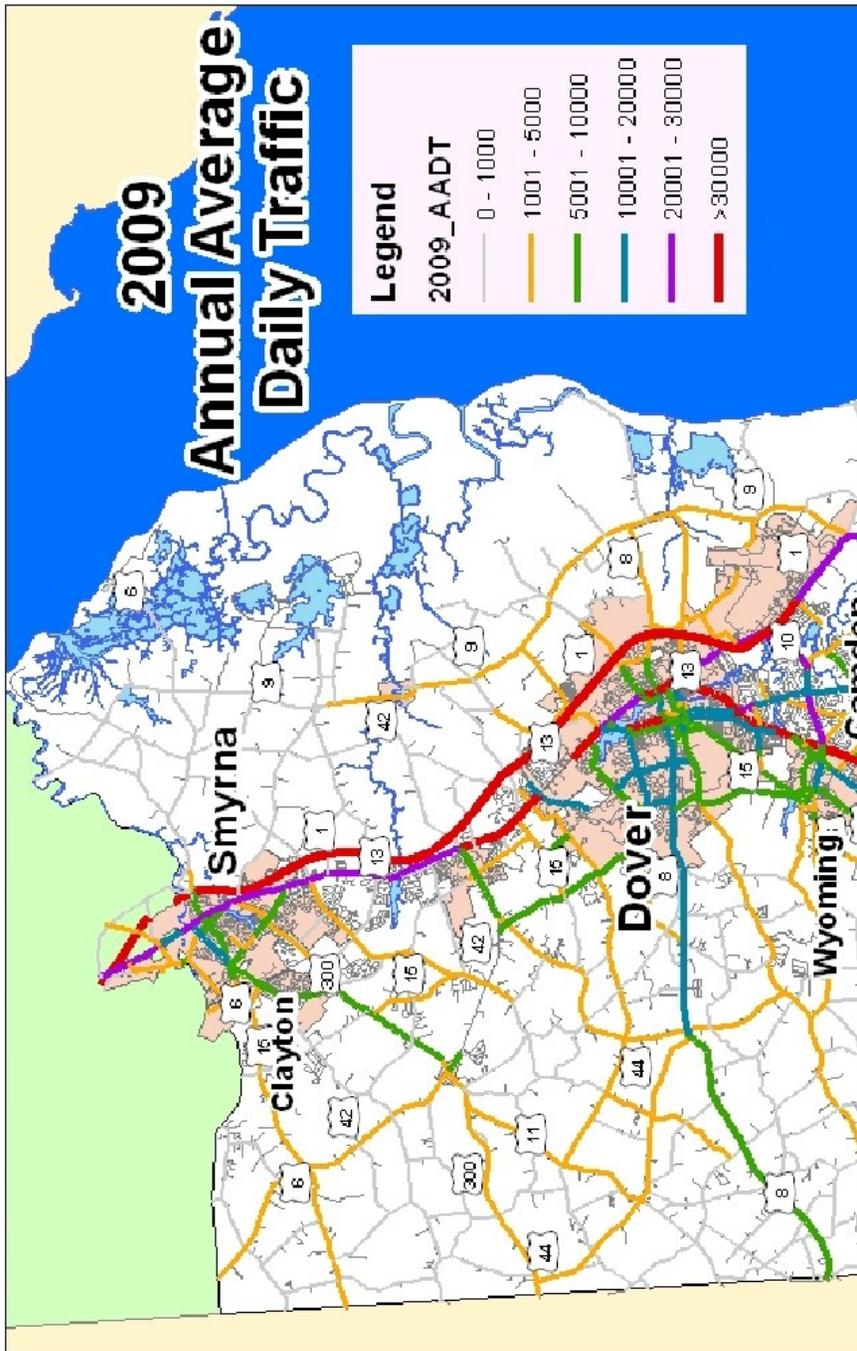
Volume to Capacity (V/C) Ratio is the volume of traffic divided by the amount of traffic the road can carry.



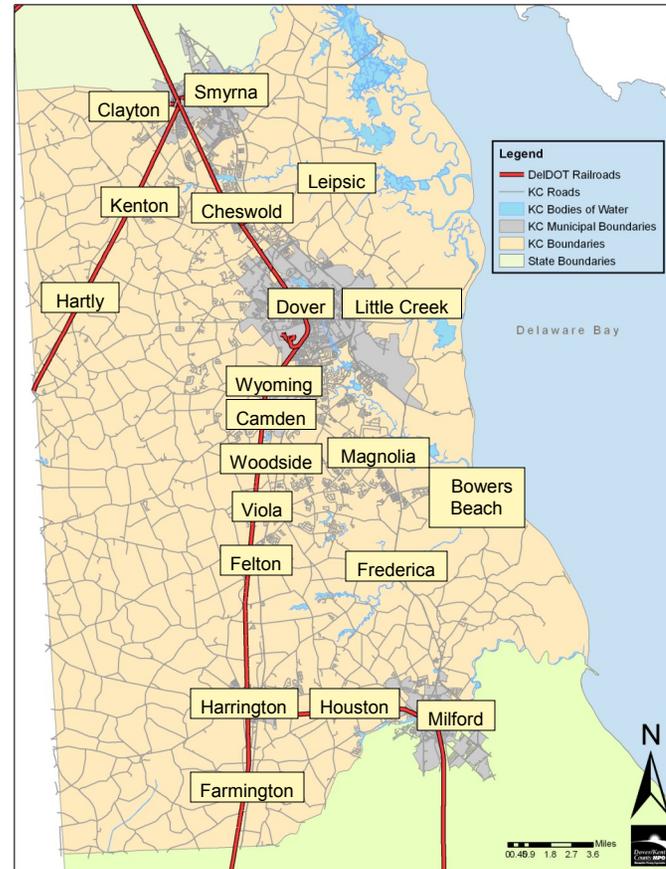
Level of Service

Level of Service is a measurement of road usage. Levels are listed from "A" to "F" like grades on a school report card to indicate the quality of travel that motorists perceive.

- - - A & B: Traffic flows freely with few stops and brief delays.
- - - C: Traffic flows well; delays seem reasonable.
- - - D: Traffic moves, but motorists sense congestion.
- - - E: Traffic slows; delays seem long. The road is crowded.
- - - F: Traffic is stop-and-go with long delays. Traffic is more than the road can handle.



Kent County Rail Lines



Rail Safety

Rail is the safest mode for carrying hazardous materials (HAZMAT). However, Norfolk Southern is looking for safer places to store HAZMAT-carrying rail cars, due to the risk of terrorism and chemical spills in Delaware.



A concern in rail safety is the increase in both rail and vehicular traffic. DART's Operation Lifesaver Program provides information to local communities and schools about safely crossing railroads.

Rail Source: DelDOT

Rail

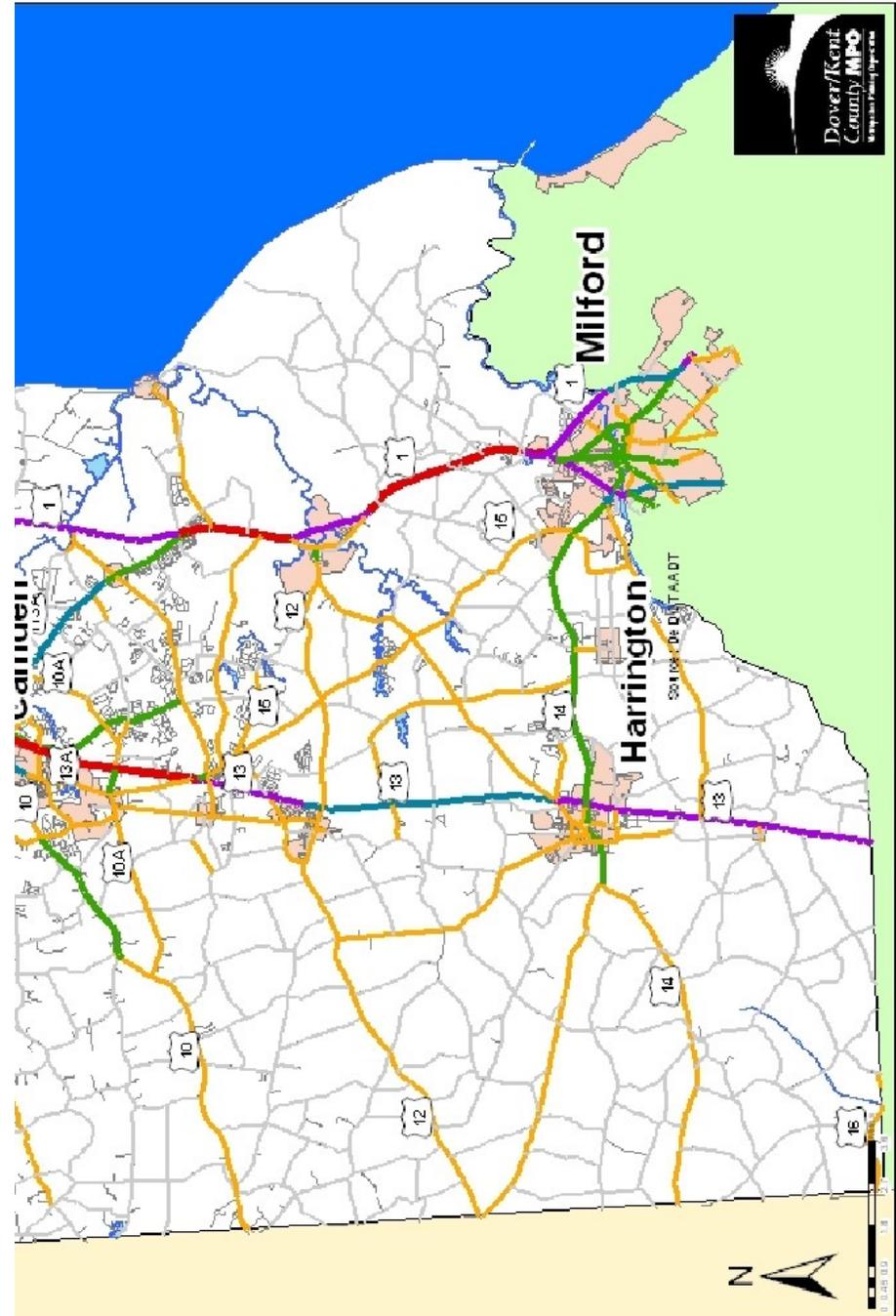


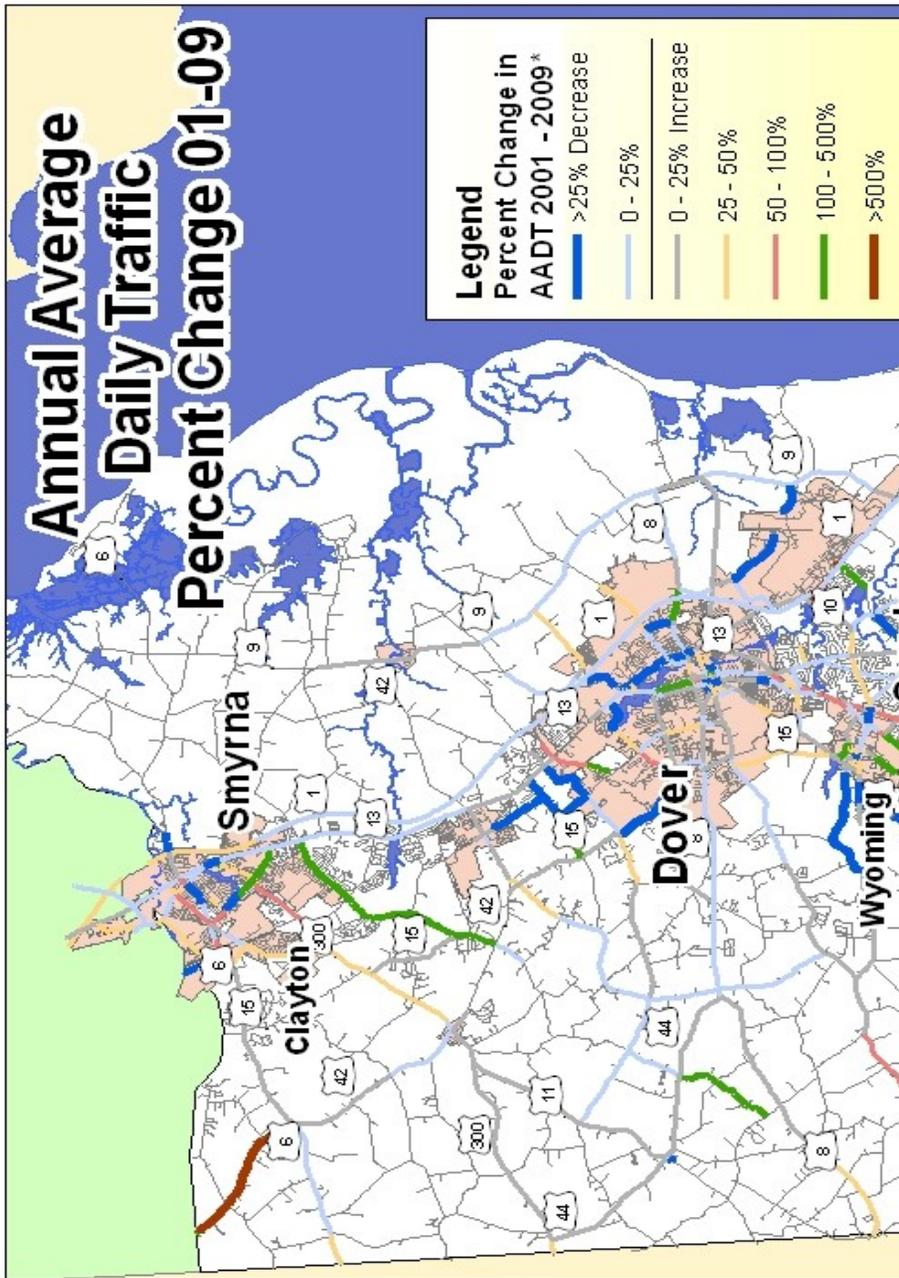
Norfolk Southern provides rail service through Kent County and lower Delaware. Food processors and chemical industries are the rail company's main customers. But trains also run through the county as they go up and down the state. A major rail yard in Harrington sends rail cars to Milford, western Sussex County, and the Eastern Shore of Delmarva via the Indian River Secondary track.



Commodities

Many commodities come to Kent County by rail. Stone, coal and grain are the three major commodities. Most of the grain is for chicken feed. Products like processed chicken and other finished products are transported by truck.

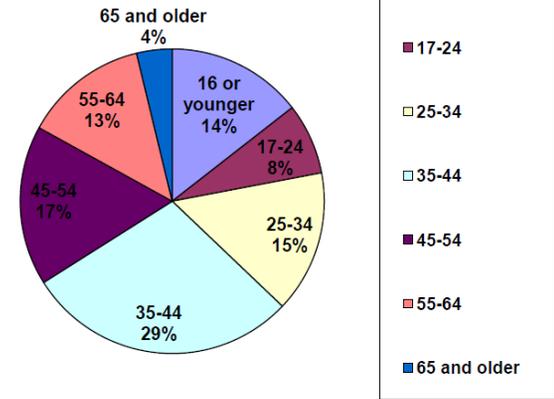




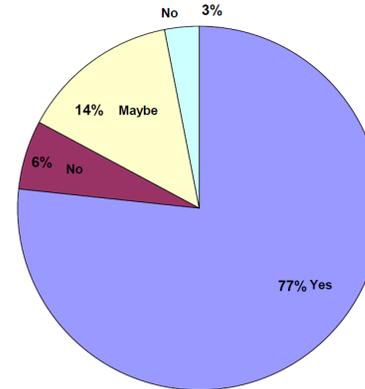
Regional Bicycle Plan

The Dover/Kent County MPO is preparing a regional bicycle plan for central Delaware. The plan will show existing bicycle trail, lane and other facilities in central Delaware. It also will show how these facilities connect, and recommend improvements. Public comments show a desire for better, safer, and more bicycle routes in Kent County. An MPO survey showed that many people ride in Kent County for recreation and exercise and that safety and accessibility in riding areas and to destinations greatly influence riding habits. Projects identified in the Regional Bike Plan will be submitted to the DelDOT for development and funding.

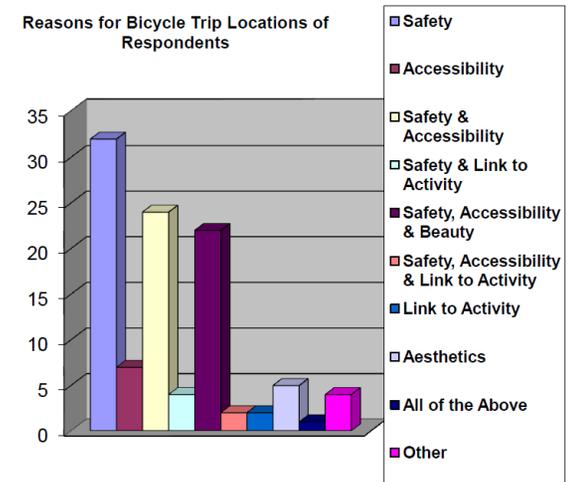
Age Distribution of Respondents



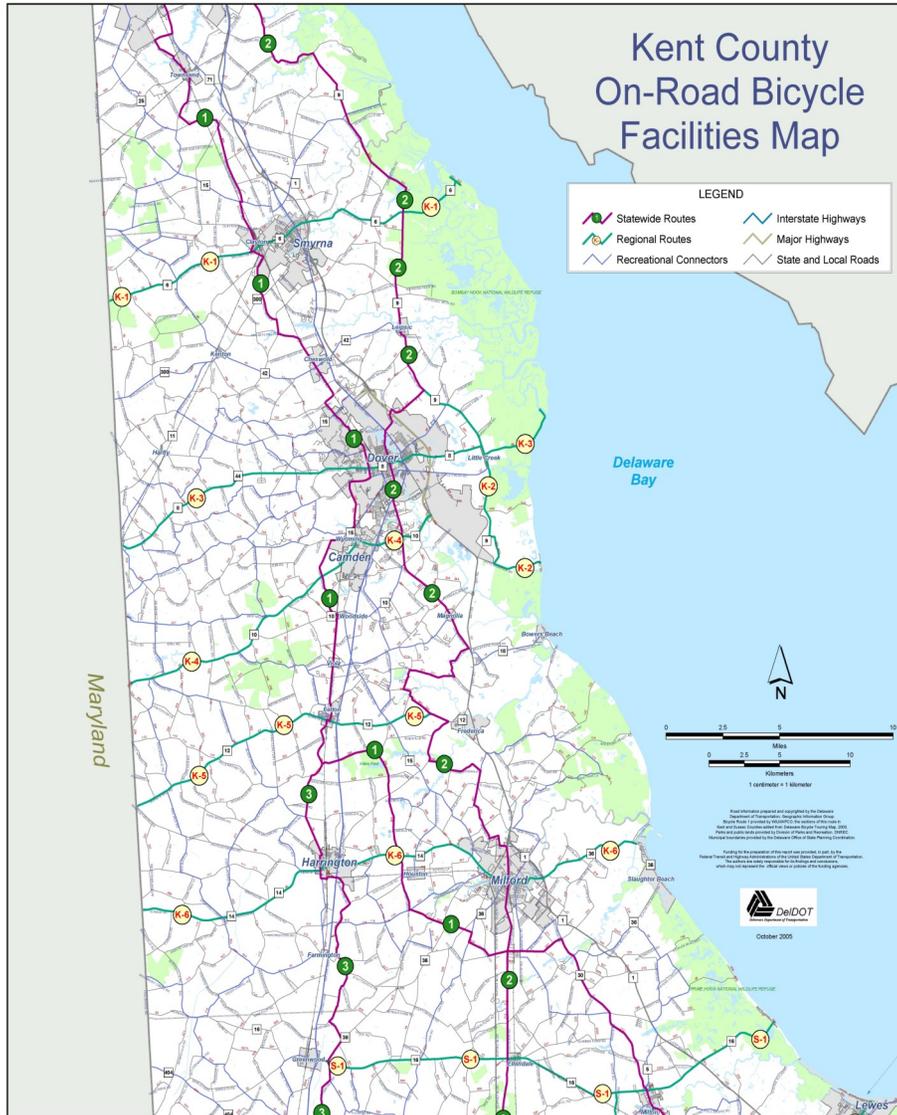
Response Results for Improvement of Bicycle Facilities Needed in Central Delaware



Reasons for Bicycle Trip Locations of Respondents

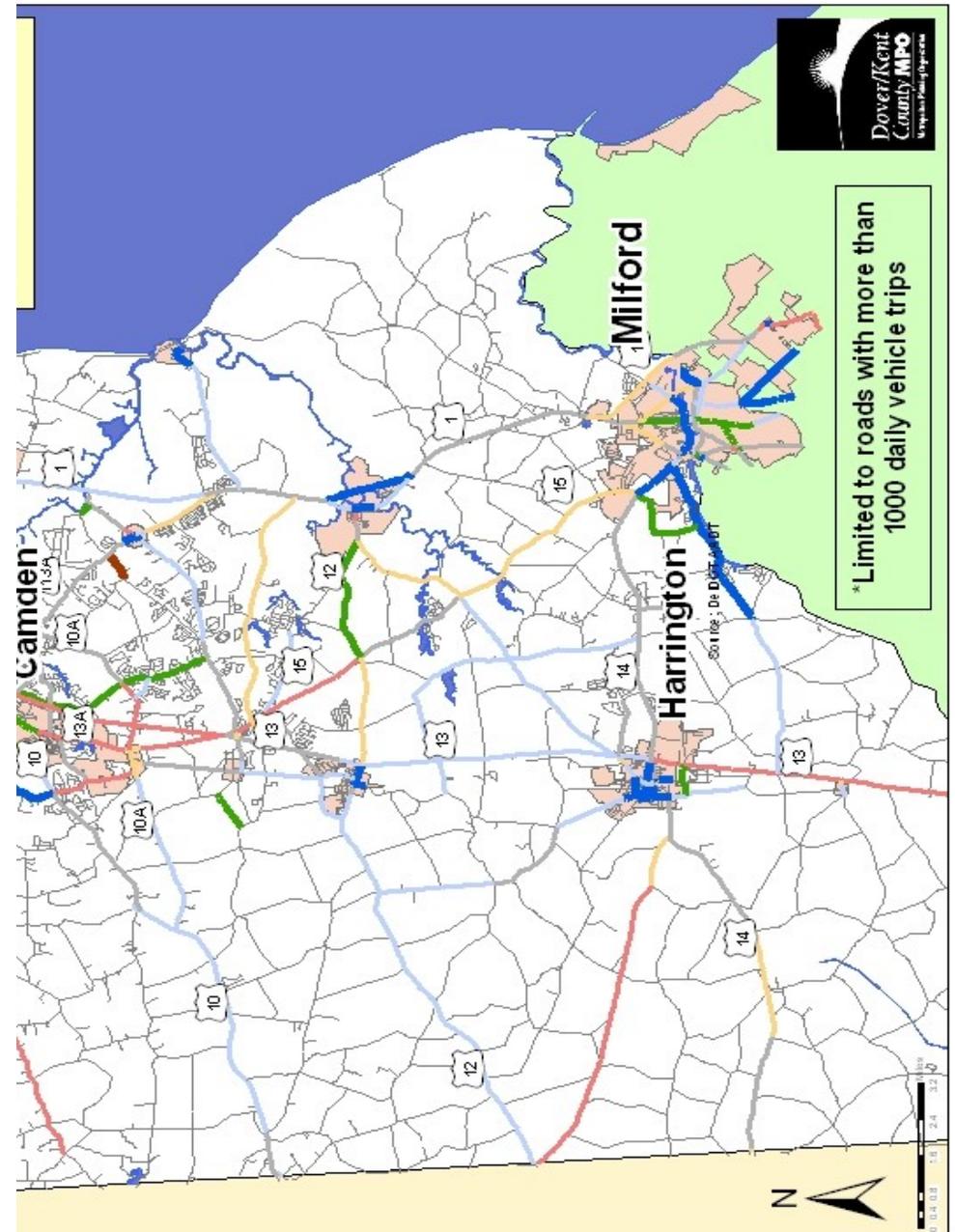


Kent County On-Road Bike Facilities



Source: DelDOT

This map represents recommendations to design and construct a continuous statewide network of bicycle facilities. It does not necessarily represent roads that are especially suitable for bicycle travel today.



VMT (Vehicle Miles Traveled)

Thousands of cars travel Kent County roads each day. The number of VMT can tell us how far they're going. VMT is calculated by taking a driver's average trip length and multiplying it by the total number of trips. There are two ways VMT is expressed: Daily VMT and Annual VMT, which is an average of Daily VMT over a year's time.



Year	DVMT
2004	4,445
2005	4,545
2006	4,601
2007	4,655
2008	4,447
2009	4,471
2009 AVMT — 1,632	



Where Do We Walk?

Kent County has several sidewalks and footpaths to suit everyone's needs. Below is a summary of these amenities in Kent County.



<i>Sidewalks</i>		<i>Footpaths</i>	
Type	Miles	Type	Miles
Asphalt	7.4	Asphalt	7.9
Concrete	399.5	Concrete	5.5
Dirt	1.3	Dirt	9.7

Information courtesy of DelDOT

Who's Driving?

Year	Number of Valid Drivers	Male Drivers	Female Drivers	Registered Passenger Vehicles
2000	97,909	38,295	45,445	83,516
2001	99,225	39,208	46,545	85,456
2002	102,065	40,365	48,030	88,691
2003	104,962	41,716	49,489	91,490
2004	108,459	43,246	51,214	94,560
2005	110,613	44,377	52,791	98,886
2006	112,239	45,079	53,744	101,573
2007	113,753	45,716	54,645	103,161
2008	114,799	55,190	59,609	139,496
2009	115,365	56,067	59,298	135,889

The 2008 and 2009 passenger vehicle number is based on tag types and not necessarily vehicle types. The 2009 figure for passenger vehicles does not include trailers or farm tractors.

Source: Delaware DMV

Kent County Bicycle Facilities



Two wheels are often better than four. DelDOT's On-Road Bicycle Facilities Map shows various bike paths, roads, highways and connections where you might like to ride. (See map, Pg. 32)

DTMS

The **D**elaware **T**rip **M**onitoring **S**ystem survey was put together by the University of Delaware for DeIDOT to answer the questions of where people go, how they get there, and how often they travel. Below are some interesting facts about Kent County residents that came out of the survey.

Trip Purpose by Three-Year Average

Destination	2007 to 2009	2006 to 2008
Work	32.0	35.2
Store	17.5	16.0
School	6.2	5.0
Drop Off/Pickup	8.3	8.2
Social	7.6	5.9
Recreation	7.2	6.7
Dining Out	4.4	4.6
Child Care	.9	.9
Doctors (medical)	4.4	4.5
Bank or Post Office	2.2	2.2
Public Transportation Stop	.0	.3
Barber/Hairdresser	.4	.4
House of Worship	2.1	1.9
Other	6.8	8.3



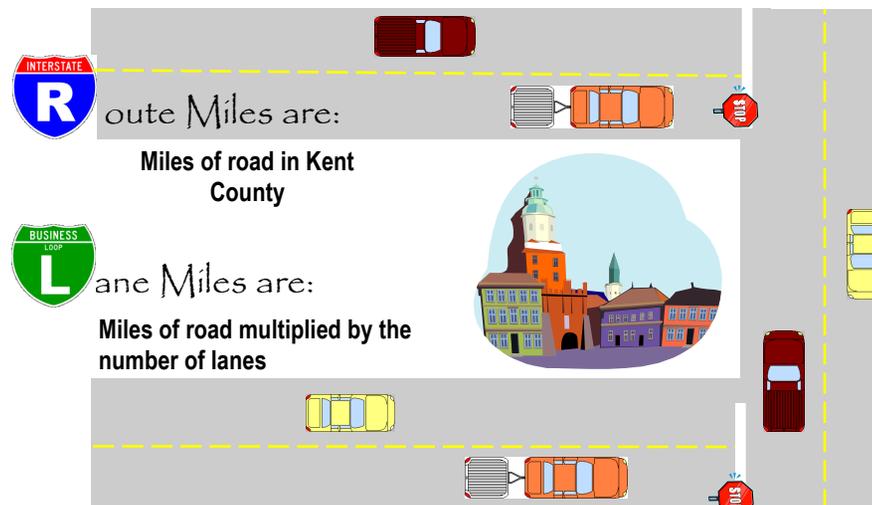
The **H**ighway **P**erformance **M**onitoring **S**ystem (HPMS) is a national database of information that serves the needs of state and local governments, MPO's, and other customers in assessing highway condition, performance, air quality trends, and future investments for the functional classification of the nation's roadways.

The data obtained from HPMS serves as a basis for determining the level of federal-aid funding states receive by congress using bi-annual Condition and Performance Reports. This ultimately affects every state that contributes data to the HPMS. Below are some of the data Delaware reports to the HPMS.

Source: DeIDOT

Roadway Mileage by Functional Classification for Kent County

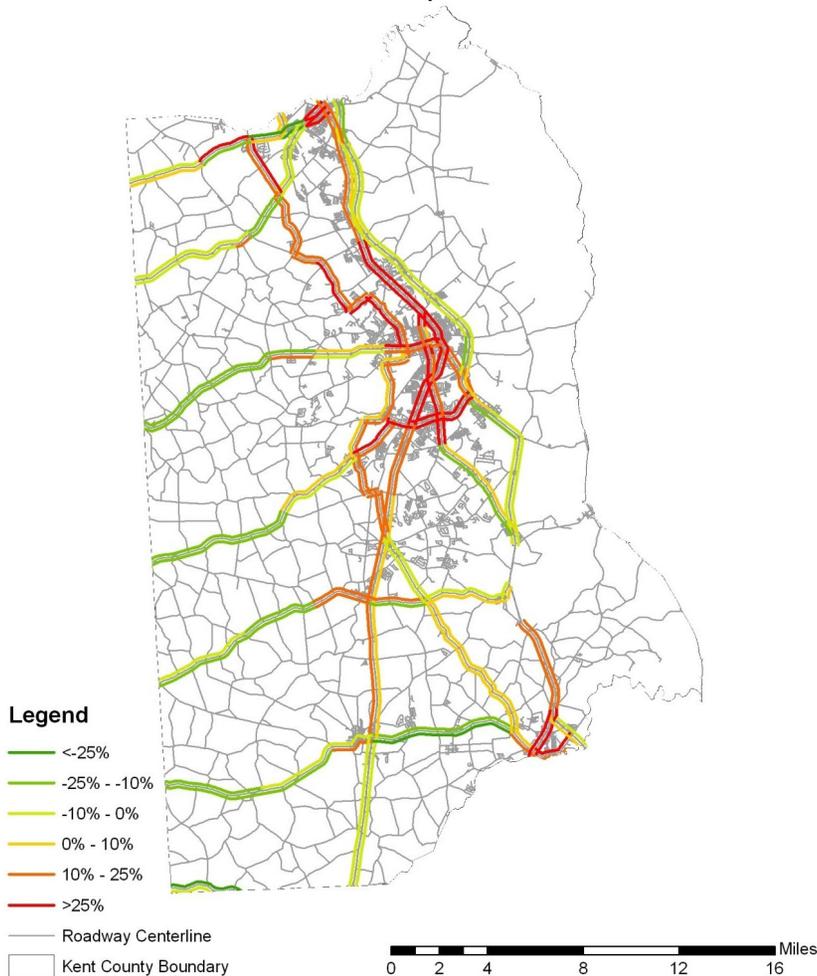
Functional Class	Route Miles 2009	Route Miles 2008	% of Total 2009	% of Total 2008	Lane Miles 2009	Lane Miles 2008	% of Total 2009	% of Total 2008
Interstate	0.00	0.00	0.00%	0.00%	0.00	0.00	0.00%	0.00%
Freeway & Expressway	20	20	1.33%	1.33%	85	85	2.69%	2.7%
Other Principal Arterials	37	40	2.46%	2.67%	150	171.18	4.74%	5.05%
Minor Arterials	115	113	7.66%	7.55%	286	264.11	9.04%	8.83%
Collectors	270	269	17.98%	17.98%	540	550.53	17.07%	17.12%
Local	1,060	1054	70.57%	70.45%	2102	733	66.47%	66.29%
Total	1,502	1,496	100%	99.98%	3,164	3148	100.01%	100.00%



Travel Speed

The maps below show the percent difference between the posted speed and the average speed on selected roads in Kent County. The difference is calculated by subtracting the average speed from the posted speed and dividing the

Travel Time & Delay Study - Fall 2009 - Kent Co.
**Percent Difference Between Posted Speed
 and Mean Speed - PM**



Source: Department of Civil & Environmental Engineering, University of Delaware and DelDOT
 (Map: Fall 2009)

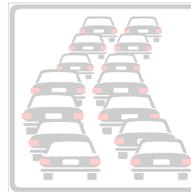
RideShare Delaware



RideShare Delaware is a program administered by DART that helps commuters find and use alternative modes of transportation including carpools, vanpools, transit, and supportive bicycle or pedestrian facilities. The goal of Rideshare Delaware is to reduce single occupancy vehicle trips as a way to improve air quality and manage traffic congestion.

Kent County Mode Split (As of May 2010)

Mode	Kent County's Participants % of Mode Total
Drive Alone	49.6%
Carpool	26.5%
Vanpool	5.8%
Transit	15.1%
Bicycle	1.5%
Walk	1.4%



Source: RideShare Delaware



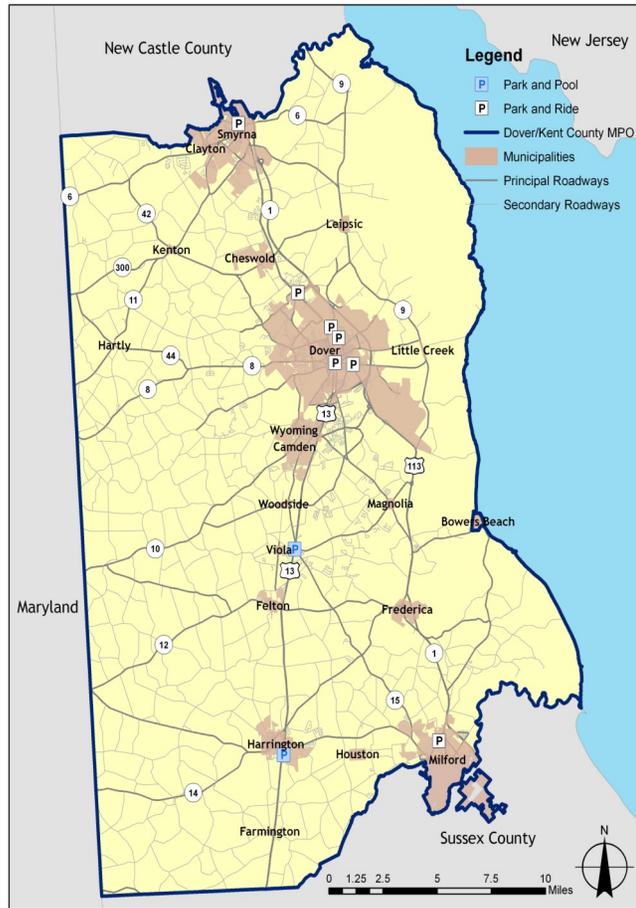
Kent County had 713 people registered in Rideshare Delaware as of May 2010

RideShare Delaware offers free ride matching services for commuters working in Delaware as well as for parents of Delaware school students. It offers an emergency ride home benefit for registered commuters actively using the service. Delaware employers also are eligible for vanpool service and transportation benefit assistance.

Commuter Patterns of Kent County Employees/Residents registered with RideShare

Kent County Residents commuting to...	New Castle County	Kent County	Sussex County	Other
Kent County Employees commuting from...	320	151	84	
	New Castle County	Kent County	Sussex County	MD PA
	83	151	56	14 4

Park-n-Ride and Park-n-Pool



Park-n-Ride

Delaware Agricultural Museum , U.S. 13, Dover
Rts., 109, 112

Water Street Transfer Center, Dover
Rts. 101-109, 112, 113, 301, 303

St. Andrews Lutheran Church, U.S. 13, Dover
Rts. 108, 109

Faith Community Church, U.S. 13, Camden
Rts. 104, 303

Scarborough Road (DelTech), Dover
Rts. 112, 301, 305

Park-n-Pool

Shore Stop/Valero
U.S. 13, Canterbury

Milford Bowling Lanes
U.S. 113, Milford

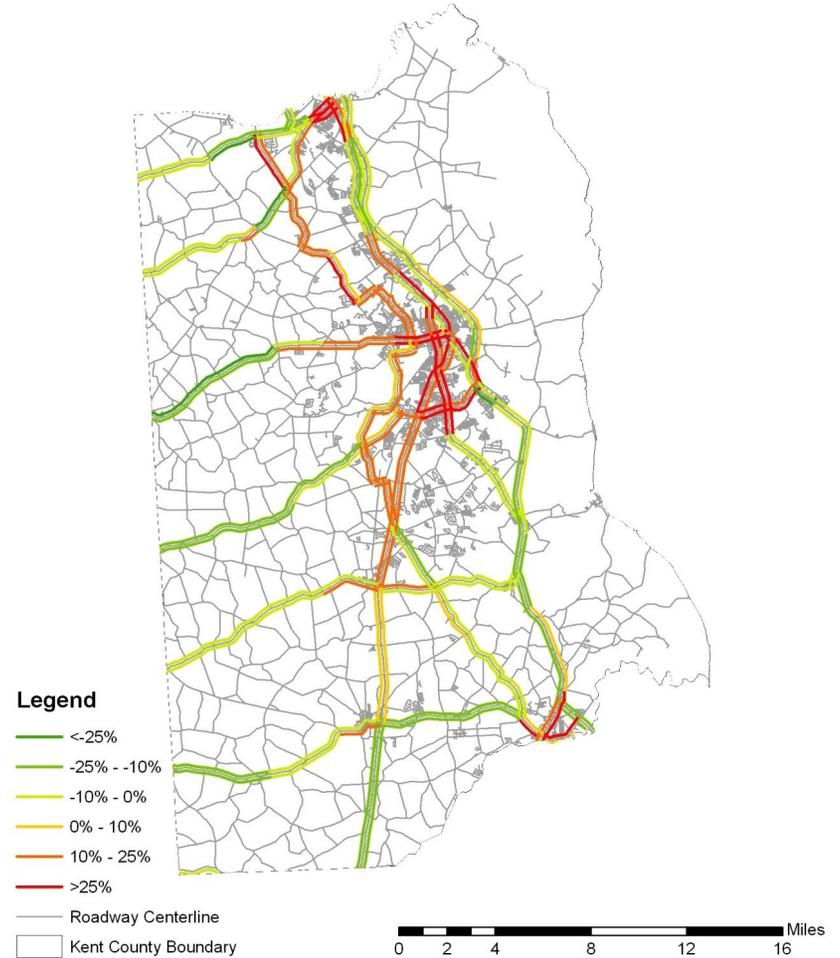
Harrington Moose Lodge
U.S. 13, Harrington



Travel Speed

difference by the posted speed. On green roads, travel was 25 percent faster than the posted speed. On red roads, travel was 25 percent slower than the posted speed.

Travel Time & Delay Study - Fall 2009 - Kent Co.
Percent Difference Between Posted Speed
and Mean Speed - AM



Source: Department of Civil & Environmental Engineering, University of Delaware and DelDOT
(Map: Fall 2009)

Crash Data



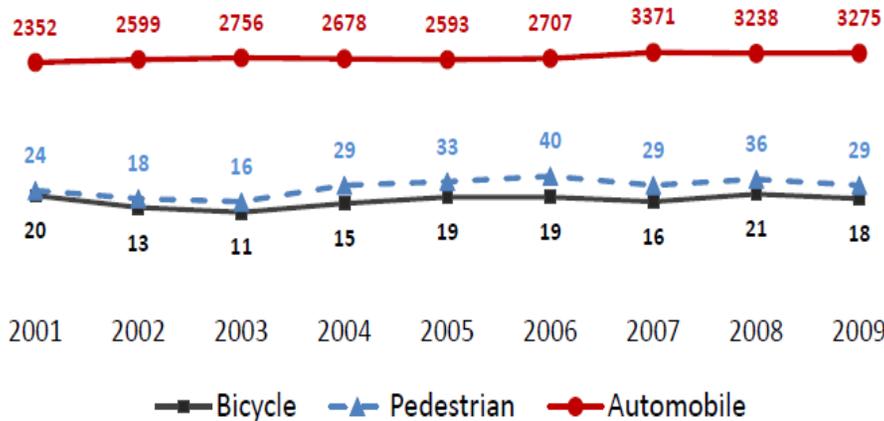
Safety is always a concern.
Below is crash-related data for Kent County.

Crashes

For Kent County between 2001 and 2009

Crash Comparison

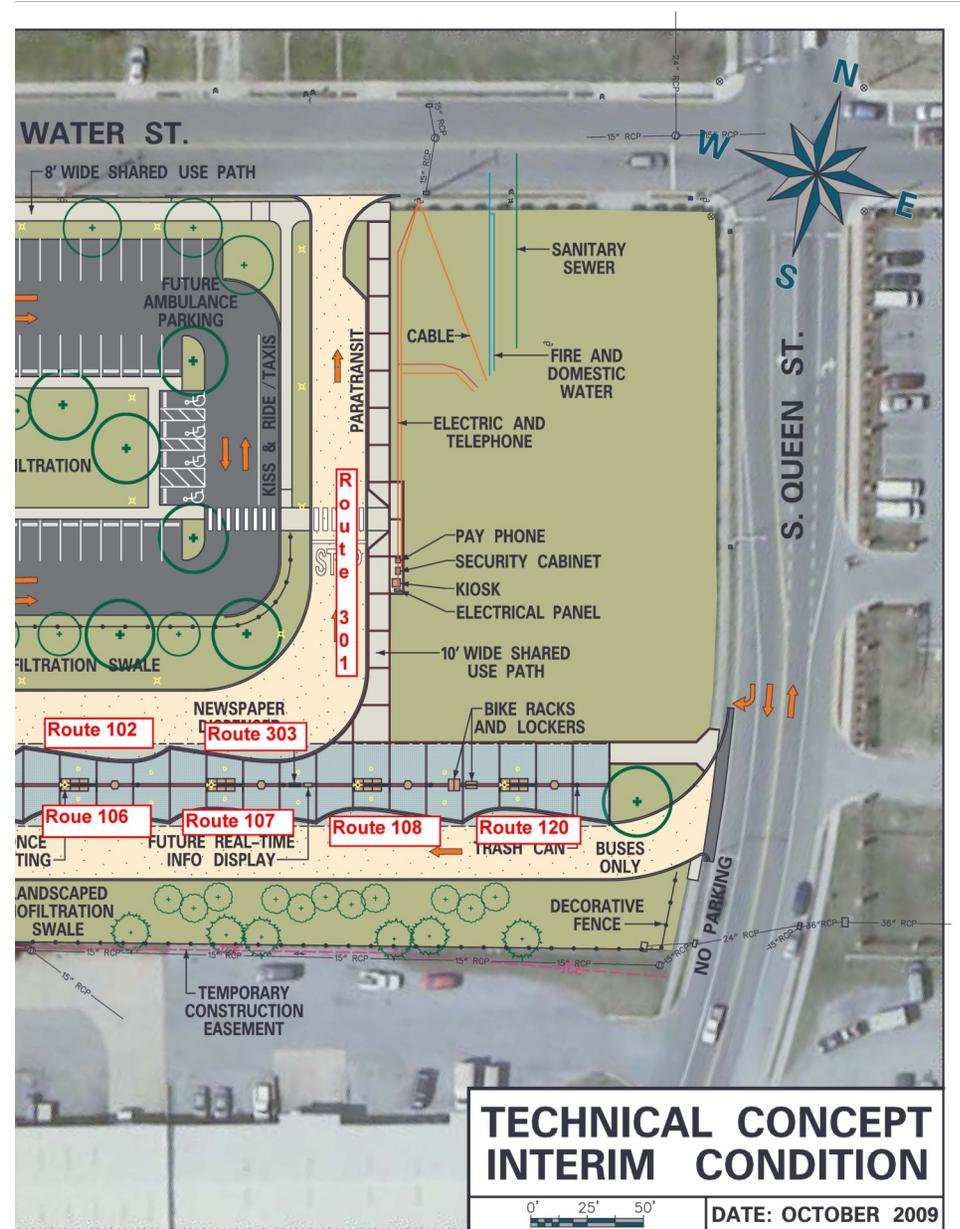
Bicycles, Pedestrians and Automobiles



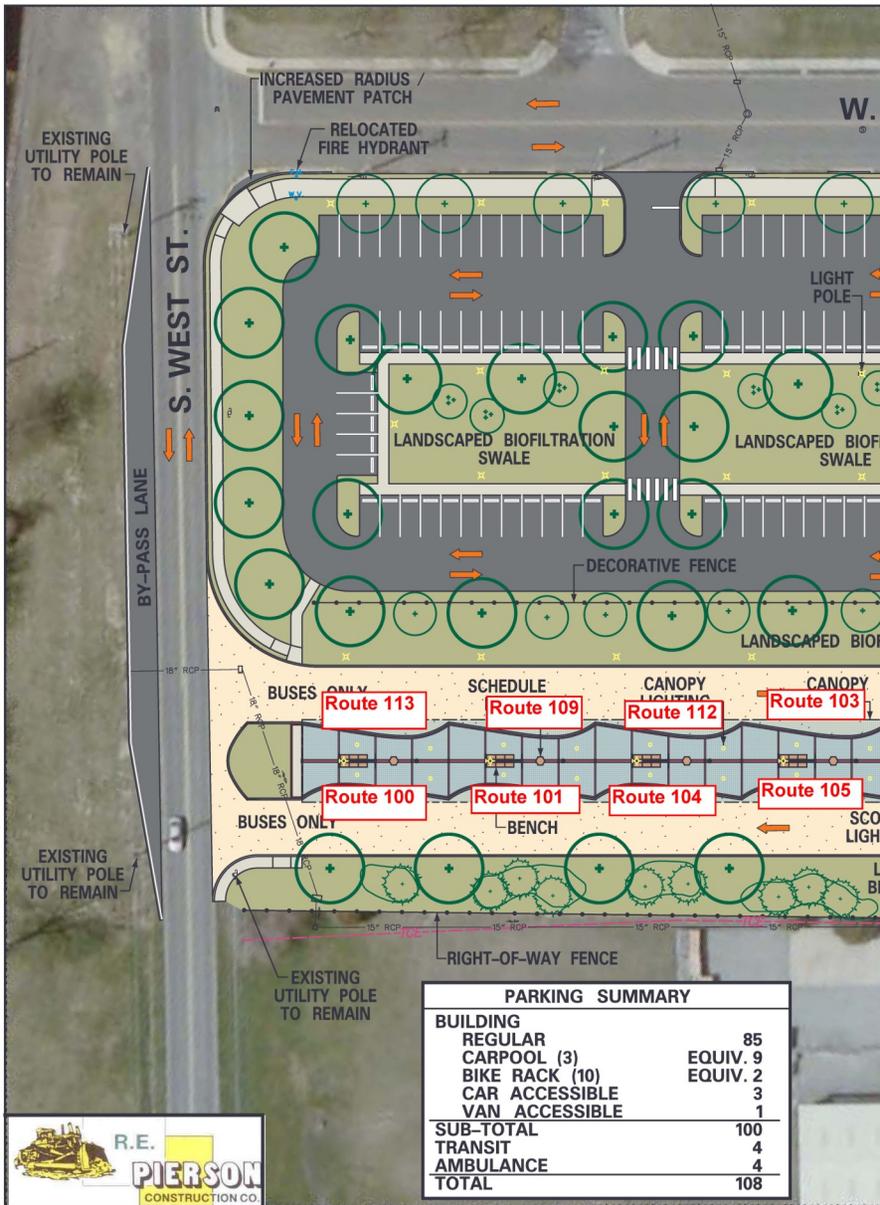
There were **220** alcohol related crashes in Kent County in 2009

Kent County vehicle crashes **increased 1%** from 2008 to 2009

Source: Delaware State Police



Over Transit Center at Queen and Water Streets.
: DART



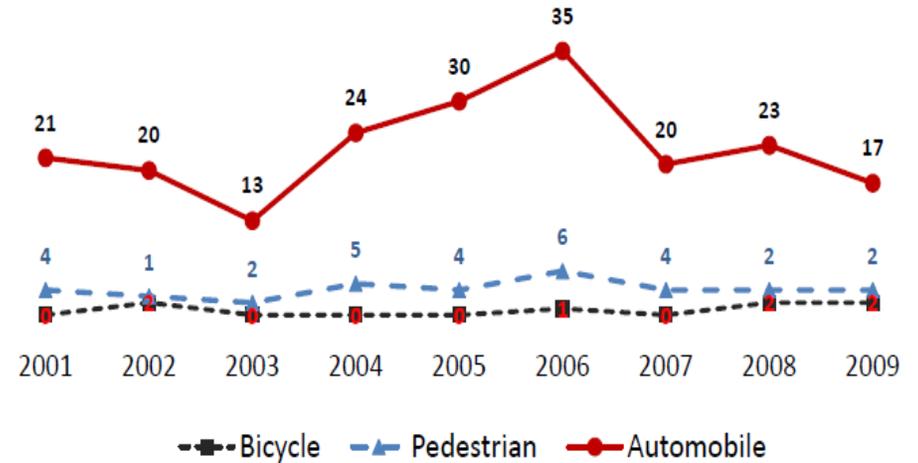
Fifteen DART bus routes travel in and out of the Center. Source:

Fatalities



Delaware's fatal auto crash rate is eighth in the country for auto crashes. Kent County has the fewest auto-related fatalities of Delaware's three counties.

Fatal Crash Comparison Bicycles, Pedestrians and Automobiles



General Crash Types and Conditions

Crash Types and Conditions	2007	2008	2009	Road/Weather Conditions	2007	2008	2009
Collision with Fixed Object	588	519	556	Wet Road	530	576	711
Pedestrian/Bicycle	41	57	47	Snowy/Icy Road	149	105	156
Speeding	81	57	65	Fog/Smog/Smoke	42	26	27
Collision with animal	89	104	131	Clear Conditions	2,317	2,212	1,968

Source: Delaware State Police
Some collisions might have had overlapping conditions

Safety Programs

Delaware has many programs to help keep travelers safe. The **Highway Safety Improvement Program (HSIP)** is a comprehensive safety program whose goal is to reduce fatal and injury crashes on highways. As a part of HSIP, four other programs exist to evaluate unsafe roads and crossings.

The **Hazard Elimination Program (HEP)** evaluates safety conditions and recommends improvements for high crash locations.

The **High Risk Rural Roads Program** evaluates safety conditions and recommends improvement for high crash rural collector and rural local roads.

The **Strategic Highway Safety Plan** is the state's collaborative plan to reduce fatal crashes, and the **Highway/Rail Grade Crossing Safety Program** annually reviews each highway rail grade crossing for safety.



Transit

DART First State (DART) is Delaware's transit service for fixed-bus routes and paratransit service. Delaware Transit Corporation (DTC), a division of DeIDOT, operates DART. DART offers week-day service between Smyrna, Dover, and Milford, and throughout the greater Dover region. Saturday service exists in the Dover area. For detailed times, schedules, and route maps, visit DART's Web site at www.DartFirstState.com.



Source: DelDOT

Source: DelDOT



Source: DART First State

 = DART's Transit Transfer Center

GoLink Service



GoLink Flex and GoLink Night services are available to Dover residents and commuters from 6 a.m. to 9 p.m. Monday through Friday for fixed route bus stops.

GoLink Flex service provides additional accessibility to residents who live beyond walking distance of a DART fixed route bus stop. Residents who live within designated Flex Zones are able to make reservations for connections between their community and a fixed route bus stop.

GoLink Night service provides the convenience of off-peak night time transit services to commuters within the Dover area through the existing paratransit service. Reservations for these services must be made between one and seven days in advance of the day of service. For more information, visit www.dartfirststate.com.

(See map, Pg. 25)

Dover Transit Center

A new Dover Transit Center opened in December 2010 at the intersection of Water and Queen Streets near downtown Dover. This new transit hub is two blocks from one the Delaware Department of Transportation operated at Water Street and South Governor's Avenue. The \$5.3 million hub has a larger passenger shelter, parking lot, and bus driveways, as well as ticket vending machines, newspaper kiosks and bike racks. Funding for the new transit center came from the 2009 federal American Recovery and Reinvestment Act. (See map, Pg. 26)



DART Routes



A fuel-efficient way to get around

Local Weekday Routes

- Route 100 - Forrest Ave. (Water St. to Greentree Village Shopping Center)
- Route 101 - Walker Rd. (Water St. to Greentree Village Shopping Center)
- Route 102 - Gateway West. (Water St. to Gateway West Shopping Center)
- Route 103 - Rodney Village. (Water St. to Rodney Village)
- Route 104 - Mifflin Meadows (Water St. to Mifflin Meadows)
- Route 105 - Moores Lake Ctr. (Water St. to Gateway South)
- Route 106 - Dover AFB (Water St. to Camden Wal-Mart)
- Route 107 - Blue Hen Corporate Center (Water St. to US Route 113)
- Route 108 - Towne Point (Water St. to Townsend Blvd.)
- Route 109 - Dover Mall (Water St. to Wal-Mart)
- Route 112 - Del Tech (Water St. to US Route 13)
- Route 113 - West Dover (Water St. to Dover Mall)
- Route 117 - Harrington/Dover Shuttle (Clark's Corner to Camden Wal-Mart)
- Route 120 - Dover-Cheswold-Smyrna (Water St. to Smyrna Rest P&R)

Local Saturday Routes

- Route 101 - Walker Rd. (Water St. to Greentree Village Shopping Center)
- Route 104 - Mifflin Meadows (Water St. to Mifflin Meadows)
- Route 107 - Blue Hen Corporate Center (Water St. to US Route 113)
- Route 109 - Dover Mall (Water St. to Wal-Mart)
- Route 112 - Del Tech (Water St. to US Route 13)

Intercounty Routes

- Route 301 - Dover to Wilmington
- Route 303 - Dover to Georgetown

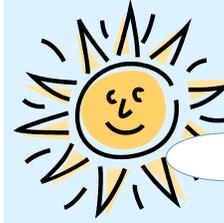
DART Routes as of 2010

DART's Fixed-route Bus System - Dover



 = DART's Transit Transfer Center

Saturday DART Service



Saturday DART service for Dover started in the summer of 2008. Since then, 44,909 people have used the service.

2009-10 Totals

July 09	1,321
August	2,342
September	1,884
October	2,274
November	2,008
December	1,345
January '10	2,001
February	1,381
March	1,750
April	1,765
May	2,087
June	1,823
Total	21,981

2008-09 Totals

July 09	1821
August	2437
September	1358
October	1710
November	2081
December	1589
January '10	1866
February	1589
March	1882
April	1927
May	2205
June	1911
Total	23,376

In a 2008 elderly mobility survey, people said they wanted more buses, stops, longer running hours and overall improved service for seniors.



Source: DART First State; DTC

Passengers Per Mile



How do you measure the productivity of a transit system like DART's fixed-route bus service? Passengers Per Mile is one method. Passengers Per Mile calculates the total number of passengers who ride a given-route over the total miles that route travels. The more passengers that ride that route, the higher the ratio. A higher ratio means the route is more productive.

Local Fixed Bus Routes

Route	2008	2009	Change Since 2008
100	0.28	0.33	0.05
101	0.92	1.03	0.11
102	1.22	1.25	0.03
103	0.68	0.85	0.17
104	1.04	1.32	0.27
105	0.88	0.63	-0.25
106	0.38	0.41	0.03
107	1.22	1.39	0.17
108	0.85	0.85	0.00
109	1.01	1.50	0.49
112	0.90	1.16	0.26
113	0.69	0.79	0.11

Intercounty Fixed Bus Routes

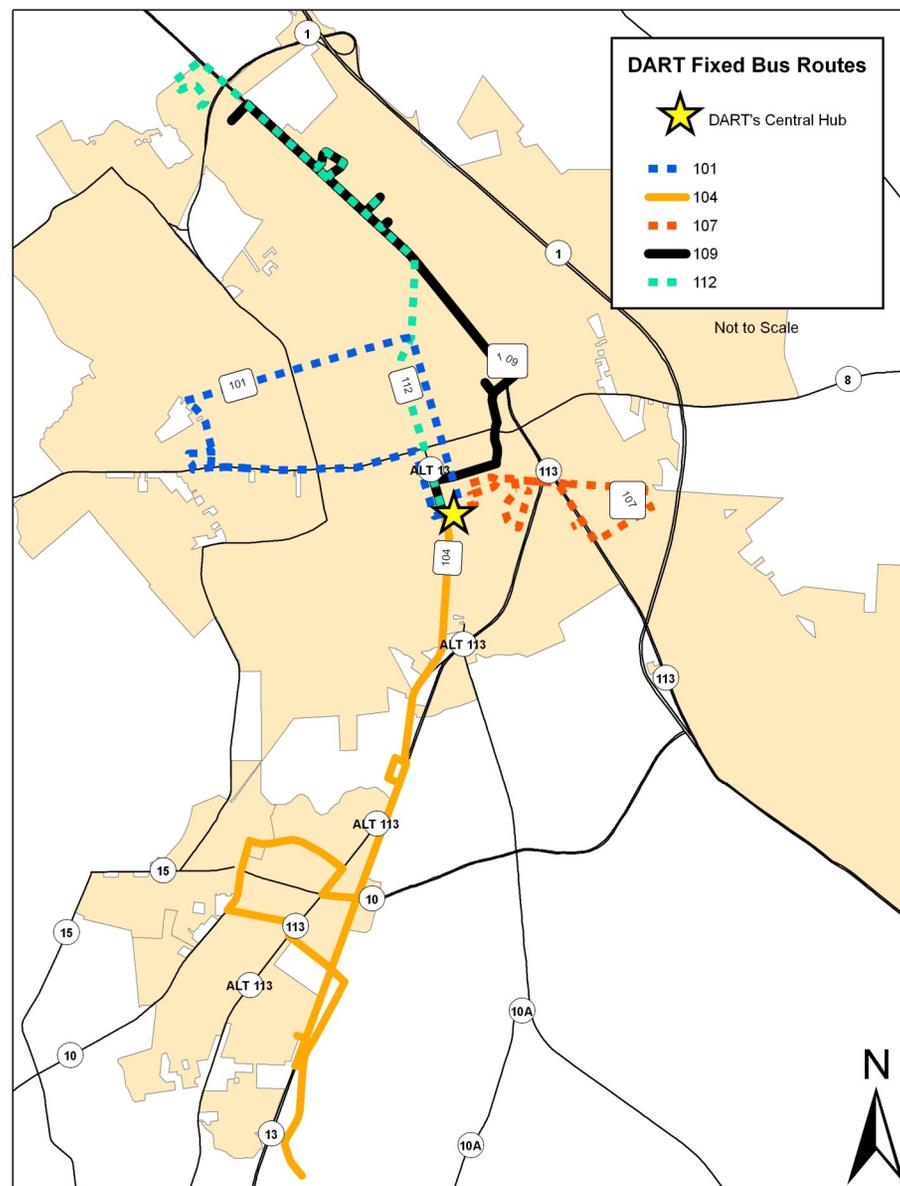
Route	2008	2009	Change Since 2008
301	.43	.41	-0.02
303	.16	.18	0.03

Paratransit Bus Routes

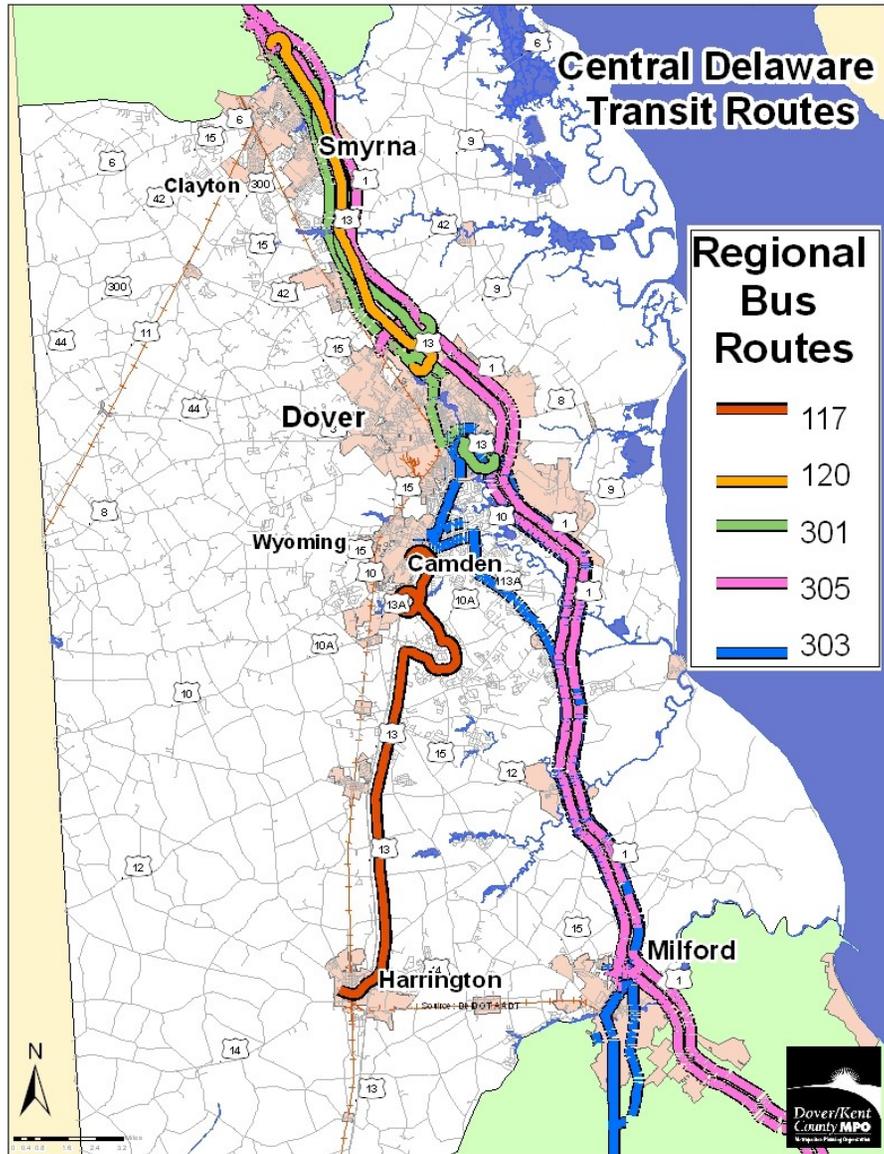
	2008	2009	Change Since 2008
Paratransit	.10	.10	0.00

Source Delaware Transit Corporation Report

DART's Fixed-route Bus Saturday Service



DART's Inter-County and Regional Fixed-route Bus Service ~ 301 and 303



Kent County Ridership

DART buses are everywhere. But how many people actually ride the bus each year? How many miles do the buses travel when taking their passengers to their destinations? Here a few quick facts:

Paratransit

Year	Passengers
2001	140,289
2002	127,660
2003	130,214
2004	150,241
2005	157,346
2006	169,171
2007	176,716
2008	183,383
2009	193,916

Source: Delaware Transit Corporation

Delaware Transit Corporation offers discounts for riders age 65 and older or for those with proof of disability.



Fixed Routes

Year	Passengers
2001	301,623
2002	308,716
2003	303,914
2004	308,759
2005	340,856
2006	364,781
2007	376,223
2008	409,942
2009	468,942